U.S. DEPARTMENT OF ENERGY

OFFICE OF SCIENCE

DOE/SC Status Review

of the

Long Baseline Neutrino Facility/Deep Underground Neutrino Experiment (LBNF/DUNE) Project

Fermi National Accelerator Laboratory

August 11-12, 2016

Stephen W. Meador

Committee Chair

Office of Science, U.S. Department of Energy

http://www.science.doe.gov/opa/

Deliverables – Due Dates

- **Closeout report (prepared in PowerPoint)**
  - Presented Friday, August 12
  - Instructions—slide 11
  - Template—slide 13
- **Final report draft (prepared in MS Word)**
  - Due Monday, August 15 to Casey (casey.clark@science.doe.gov)
  - Instructions—slide 12

DOE EXECUTIVE SESSION AGENDA

Thursday, August 11, 2016—Comitium (WH2SE)

8:00 a.m.	DOE Executive Session	S. Meador
8:15 a.m.	Program Perspective	B. Wisniewski
8:30 a.m.	Federal Project Director Perspective	P. Carolan
8:45 a.m.	Questions	
8:55 a.m.	Adjourn	

Project and review information is available at:

OPSS Website: https://web.fnal.gov/organization/OPSS/Projects/LBNFDUNE/SitePages/DOE%20Independent%20Project%20Review%20of%20LBNF-DUNE%2C%20August%2011-12%2C%202016.aspx

Project Review Site: https://web.fnal.gov/project/LBNF/ReviewsAndAssessments/DOE%20Independent%20Project%20Review%20of%20LBNF-DUNE/SitePages/Home.aspx

Password: review **Username: nurev2pass**

Review Committee Participants

Stephen W. Meador, DOE/SC, Chairperson

Review Committee

Subcommittee 1—Conventional Facilities and Technical Systems
Marty Breidenbach, SLAC
Adrienne Carney, U of Pitt
Matt Howell, ORNL
Jack Stellern, SLAC

Subcommittee 2—ES&H, Cost and Schedule, Project Management
Angus Bampton, PNNL
Tim Barr, DHS
Ian Evans, SLAC
Kurt Fisher, DOE/SC
Barbara Thibadeau, ORNL

Observers

Jim Siegrist, DOE/HEP
Mike Procario, DOE/HEP
Bill Wisniewski, DOE/HEP
Ted Lavine, DOE/HEP
Adam Bihary, DOE/FSO
Pepin Carolan, DOE/FSO
Mike Weis, DOE/FSO

U.S. DEPARTMENT OF ENERGY

SC Organization

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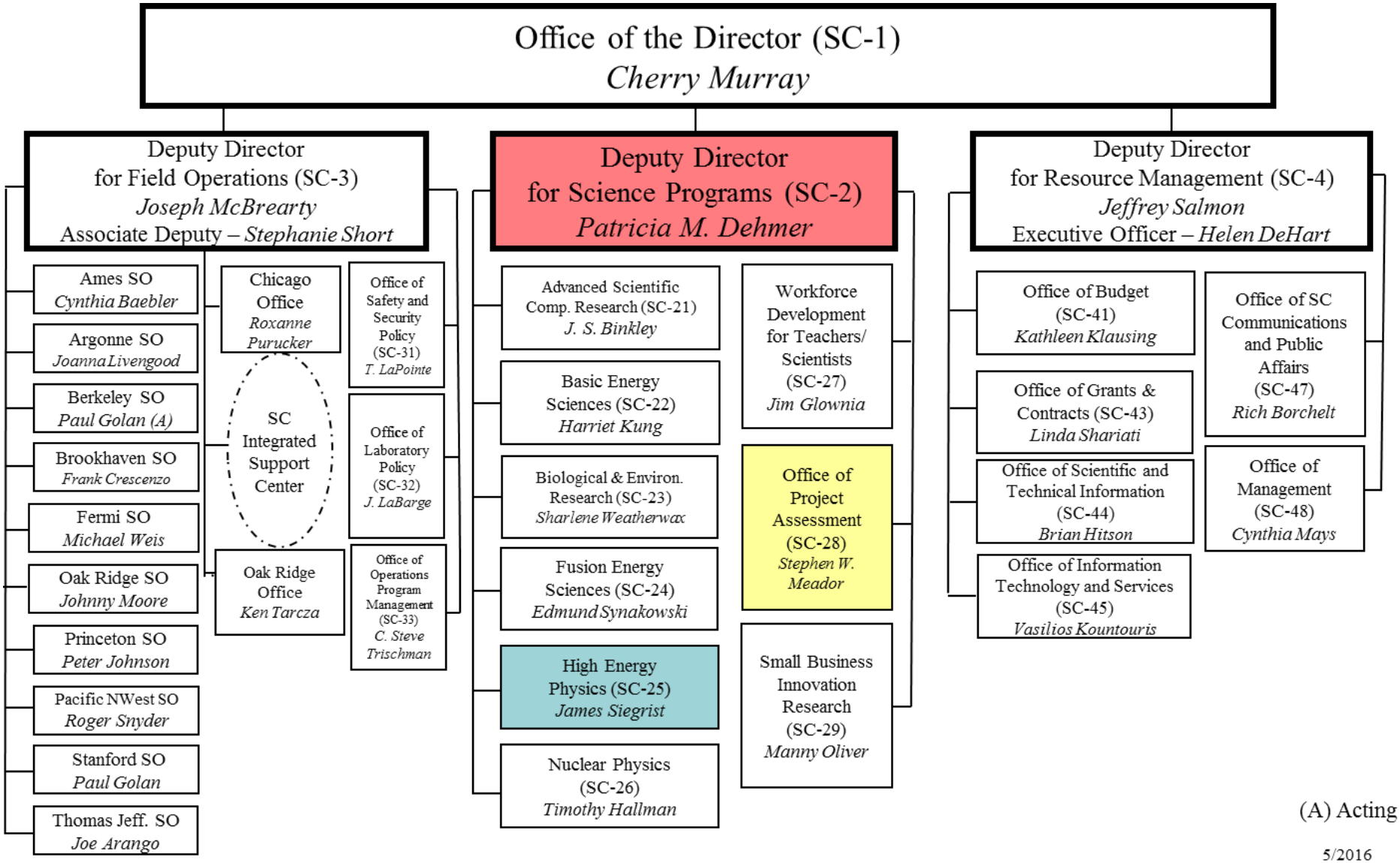

(A) Acting

5/2016

Charge Questions

1. Has LBNF made satisfactory progress in preparing to execute the CD-3a scope? Are there adequate resources in place to support the work needed for CD-3a? Is the system to track performance associated with these activities in place and functioning?

2. Are the requirements, the design, and the interfaces pertaining to the far site conventional facility (FSCF) CD-3a scope under effective configuration control and management?

3. Is the LBNF/DUNE project appropriately and effectively managed, including risk and contingency?

4. Has the project responded appropriately to the recommendations of the 2015 DOE IPRs that are related to the CD-3a scope?

Agenda

Thursday, August 11, 2016—Comitium (WH2SE)

8:00 am	DOE Executive Session—**Comitium (WH2SE)** ..... S. Meador
9:00 am	Introduction and Welcome—**One West (WH1W)** ..... N. Lockyer
9:20 am	LBNF Status.....C. Mossey
9:55 am	Far Site Facilities Progress .....M. Headley
10:30 am	Break—Available Outside One West
10:45 am	DUNE Collaboration Management & Organization .....M. Thomson
11:15 am	LBNF/DUNE Cost, Schedule, Contingency and Risk Update .....E. McCluskey
11:45 am	Lunch—**15th Floor Crossover**
12:35 pm	Reviewer Photo—**Atrium**
12:45 pm	Blast Vibration Test and Pre-excavation .....J. Willhite
1:15 pm	Far Site Conventional Facilities (FSCF) Interfaces & Requirements UpdateTBD
1:35 pm	FSCF Final Design Plan Status.....T. Lundin
1:55 pm	FSCF CM/GC Contract.....T. Lark
2:15 pm	Plan for SURF Reliability Projects .....TBD
2:30 pm	Break—Available Outside One West
2:45 pm	FSCF Construction Period Management Plan ..... D. Pelletier
3:10 pm	ES&H: FSCF Construction.....M. Andrews
3:45 pm	Subcommittee Breakout Sessions
	ES&H, Cost and Schedule, Project Management—**Comitium (WH2SE)**
	Conventional Facilities and Technical Systems—**(WH2NW)**
5:00 pm	DOE Full Committee Executive Session—**Comitium (WH2SE)**
6:30 pm	Adjourn

Agenda (cont'd)

Friday, August 12, 2016

8:00 am	Parallel Subcommittee Breakout Sessions—Continued in same rooms
9:30 am	Subcommittee Executive Session/Report Writing
10:00 am	Break—Available Outside Comitium
10:30 am	DOE Full Committee Executive Session/Report Writing—**Comitium (WH2SE)**
12:00 pm	Working Lunch & Closeout Dry Run
3:00 pm	Closeout—**One West (WH1W)**
4:00 pm	Adjourn

Report Outline/Writing Assignments

Executive Summary/Summary (2-page) Report.....Fisher*

1. Introduction .....Wisniewski*
2. Technical Systems Evaluation (Charge Questions 1, 2, 4)
   - 2.1 Detectors Breidenbach*/SC-1
     - 2.1.1 Findings
     - 2.1.2 Comments
     - 2.1.3 Recommendations
   - 2.2 Cryogenic Howell*/SC-1
3. Conventional Facilities (Charge Questions 1, 2, 4).....Stellern*/SC-1
4. Environment, Safety and Health (Charge Questions 1, 2, 4)..... Evans*/SC-2
5. Cost and Schedule (Charge Questions 1, 2, 4) Bampton*/SC-2
6. Project Management (Charge Questions 1, 2, 3, 4) Thibadeau*/SC-2

*Lead

Closeout Presentation

and Final Report

Procedures

Format: Closeout Presentation

(Use PowerPoint / No Smaller than 18 pt Font)

2.1 Use Section Number/Title corresponding to writing assignment list.

List Review Subcommittee Members

List Assigned Charge Questions and Review Committee Answers

2.1.1 Findings – What the project told us

- In bullet form, include your account of factual technical, cost, schedule, and management. Information provided/presented by the Project

2.1.2 Comments – What we think about what the project told us

- In bullet form, include your assessment of project status (observations, concerns, feedback, suggestions, etc.) based on the findings. This section carries more emphasis than the Findings, but does not require an action as do the Recommendations. Do not number your comments.

2.1.3 Recommendations – What we think the project needs to do

1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.

For Critical Decision reviews, include a specific recommendation addressing how the Committee judged the readiness for the CD, *i.e.*:

- **The project is ready to proceed to CD-2; *or***
- **The project is ready to proceed to CD-2, after addressing the following recommendations**

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Format: Final Report

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(Use MS Word / 12pt Font)

2.1 Use Section Number/Title corresponding to writing assignment list.

2.1.1 Findings – What the project told us

Include a brief narrative description of technical, cost, schedule, management information provided by the project. Each subcommittee will emphasize their area of responsibility.

Cost and schedule subcommittee should provide attachments for approved project cost breakdown and schedule. Management subcommittee should provide attachment for approved project organization and names of personnel.

2.1.2 Comments – What we think about what the project told us

Descriptive material assessing the findings and making observations and conclusions based on the findings. **The committee's answer to the charge questions should be contained within the text of the Comments Section.** Do not number your comments.

2.1.3 Recommendations – What we think the project needs to do

1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.

2.

Please Note: Recommendations are approved by the full committee and presented at the review closeout briefing. Recommendations SHOULD NOT be changed or altered from the closeout report to the Final Report.

Closeout Report on the DOE/SC Status Review of the

Long Baseline Neutrino Facility/Deep Underground Neutrino Experiment (LBNF/DUNE) Project

Fermi National Accelerator Laboratory

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4. Has the project responded appropriately to the recommendations of the 2015 DOE IPRs that are related to the CD-3a scope?

- **Findings**
- **Comments**
- **Recommendations**

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- **Findings**
- **Comments**
- **Recommendations**

PROJECT STATUS		
Project Type	MIE / Line Item / Cooperative Agreement	
CD-1	Planned:	Actual:
CD-2	Planned:	Actual:
CD-3	Planned:	Actual:
CD-4	Planned:	Actual:
TPC Percent Complete	Planned: _____%	Actual: _____%
TPC Cost to Date		
TPC Committed to Date		
TPC		
TEC		
Contingency Cost (w/Mgmt Reserve)	$	_____% to go
Contingency Schedule on CD-4b	_____months	_____%
CPI Cumulative		
SPI Cumulative		

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- **Findings**
- **Comments**
- **Recommendations**